PROPOSED AWC NPDES PHASE II MONITORING CONDITION

Fact Sheet Background for Proposed AWC Monitoring Condition

The components of a small NPDES Phase II municipal Stormwater Management Program (Program) and the Total Daily Maximum Load-required water quality clean-up plans are mandated by the U.S. Environmental Protection Agency and Ecology. The intent of the Program Components and TMDLs is to reduce the discharge of pollutants from regulated small municipal separate storm sewer systems (MS4s) to the maximum extent practicable (MEP) and to protect water quality. The goals of this monitoring plan are to ensure this intent is being achieved by permittees through:

- Compliance Monitoring – document implementation of Program Components and TMDLs;
- Effectiveness Monitoring – document and demonstrate effectiveness of the Program Components and TMDL-required clean-up plans; and
- Adaptive Management Process- provide a feedback loop to continually improve effectiveness of Program Components and TMDL-required water quality clean-up plans.

Permit Condition S6 Small MS4s Environmental Results Monitoring

Compliance Monitoring

i. In the annual report (beginning in the year 2007), document implementation of the Stormwater Management Program Components (per the Permit implementation schedule) and EPA-approved TMDLs.

Effectiveness Monitoring and Adaptive Management Process

ii. Within (*X years)* of permit issuance, identify an evaluation measure to be monitored for each Program Component. If water quality monitoring is a specific requirement of an EPA-approved TMDL listed in the Permit, develop a TMDL monitoring Quality Assurance Project Plan (QAPP).

The evaluation measures and monitoring required under an EPA-approved TMDL will document environmental effectiveness of the Program and water quality clean-up plan. The Phase II permittees will use the data to adaptively manage the Program and TMDL-water quality clean-up plans to improve their effectiveness.

The evaluation measure that the permittee identifies for each Program Component is in addition to those already identified by Ecology in the preliminary draft permit.

Examples of potential evaluation measures, along with evaluation measures already identified by Ecology for Program Components, are provided in Attachment A.

iii. Within (*X years)* of permit issuance, a technical peer review team of Phase II stormwater professionals, representative from Ecology, and an independent stormwater professional will be created. Phase II permittees will submit evaluation measures (and how they plan to implement them) to the team for technical peer review and recommendations.

iv. Within (*X years)* of permit issuance, municipalities will consider the technical peer review team recommendations, incorporate recommendations as appropriate and finalize evaluation measures in a NPDES Phase II Monitoring Plan. The Plan will be submitted to Ecology with the (*X year)* annual report.

v. Upon Ecology-approval of the monitoring plan, the Phase II permittee will begin monitoring the evaluation measures, documenting the results, and demonstrating how they have used them to adaptively manage their Program and Water Quality Clean-up Plans.

ATTACHMENT A
PROPOSED AWC NPDES PHASE II MONITORING CONDITION

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Below are examples of potential evaluation measures for the five Stormwater Management Program Components and TMDLs. Evaluation measures already identified by Ecology in the preliminary draft permit are also noted.

EXAMPLES OF POTENTIAL EVALUATION MEASURES

Program Component S7.C1 Public Education & Outreach

- Monitor good housekeeping practices of businesses to document/demonstrate a reduction in the percentage of businesses that discharge pollutants into the municipal separate storm sewer system as a result of public education & outreach; for example, reduction in percentage of restaurants that dump grease and other pollutants down storm sewer drains.
- Monitor and report the number of people (new and regular people) participating and/or reached by each outreach program annually. For example, participants involved in Stream Team program, people requesting information on oil recycling and/or participating in a pollutant source control survey or workshop, etc.
- Monitor number of charity car wash events utilizing jurisdictions car wash kits/programs, and private car wash associations, e.g., Puget Sound Car Wash Association. Track the number of "safe" car wash events, # vehicles participating; estimate or evaluate the amount of pollutants diverted from the storm sewer system.
- Monitor any programs conducted for curb marking (for example, stenciling pavement in front of catch basins with "Drains to Stream, Do Not Dump"). Include number of participants, structures marked, acreages involved.
- Monitor number of businesses referred to other pollution prevention programs at the local, state, or national level.

Program Component S7.C2 Public Involvement & Participation

- Monitor opportunities for stakeholders and citizen participation in developing Stormwater Management Program and TMDL programs.
- Monitor percentage of the community participating in community clean-up and/or other water quality outreach activities, i.e., stream team, business partners for clean water, etc.

Program Component S7.C3 Illicit Discharge Detection & Elimination

- Ecology-specified evaluation measure in preliminary draft permit: "Monitor, characterize, quantify where possible, and document the reduction in illicit connections to and illicit discharges from the MS4, including this permit required measure:

  S7.C3. ii. Each Permittee shall prioritize receiving waters for screening for illicit connections and other illicit discharges and shall conduct field screening of all outfalls into three high priority water bodies no later than the three years from the effective date of this permit, and shall conduct field screening on at least one water body per year there after. Screening for illicit connections shall be conducted using: Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments, Center for Watershed Protection, October 2004, or an equivalent methodology."

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Program Component S7.C3 Illicit Discharge Detection & Elimination Continued

- Monitor, characterize and document the reduction in pollutants discharged to the municipal separate storm sewer system from illicit discharges detected and eliminated;
- Monitor and document households participating in quarterly household hazardous waste special collection days; estimate quantities of hazardous wastes diverted from the MS4 system from the special collection days.

Program Component S7.C4 Controlling Stormwater Runoff from New Development, Redevelopment, & Construction Sites

- Construction flow control – Monitor # of enforcement actions and/or compliance with turbidity standards through turbidity monitoring.

Program Component S7.C5 Pollution Prevention and Operations & Maintenance for Municipal Operations

- Monitor sediment accumulation rates for public flow control, water quality treatment facilities and catch basins to adaptively manage the Program to achieve the most effective pollutant removal maintenance schedule (i.e., cleaning frequency).
- Estimate the volume of sediment and other pollutants removed from the MS4 through implementation of the Pollution Prevention and Operations and Maintenance for Municipal Operations Program BMPs (i.e., sediments, chlorinated water, hydrocarbons, metals, etc.).
- Monitor and report tonnage removed from public streets due to street sweeping activities. Use collected data to optimize removal of dust, dirt, and other particulates.
- Monitor the tonnage, volumes of sediments and decant from private storm system inspection programs..

Permit Condition S4 Total Maximum Daily Loads

- Ecology conducts a Use Attainability Analysis (UAA) prior to initiating TMDL-required water quality clean-up plan to verify that the TMDL is based on science and is in accordance with community values.
- The following evaluation measures for applicable TMDLs were identified in the preliminary draft permit by Ecology:

"S4. B. ...Permittees shall track actions required by this Permit that are relevant to applicable TMDLs within their jurisdiction."

"S4. C 1. If water quality monitoring is a specific requirement of a TMDL listed in Appendix 3, the Permittee must develop and implement a TMDL monitoring Quality Assurance Project Plan (QAPP). The Permittee shall submit the TMDL QAPP no later than 90 days after the effective date of this permit, unless otherwise specified in Appendix 3. The monitoring plan shall be submitted to the Department in both paper and electronic form and shall include:

a. A detailed discussion and description of the goal and objective(s), monitoring (experimental) design, and sampling and analytical methods.
b. A list and maps of the selected TMDL monitoring sites.
c. The frequency of data collection to occur at each station or site and the number and types of precipitation events to be targeted for sampling.

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Permit Condition S4 Total Maximum Daily Loads Continued

d. The method and location(s) of precipitation measuring devices.
e. The triggers for automated flow monitoring devices.
f. The parameters to be measured, as appropriate for and relevant to the TMDL.
g. The QAPP will be implemented beginning no later than 180 days after the effective date of this permit."

"2. For TMDLs listed in Appendix 3, affected Permittees shall include, as part of the Permittee's annual report to the Department, a TMDL Summary Implementation Report. The report shall include the status and actions taken by the Permittee to implement the TMDL. The TMDL Summary Report shall document relevant actions taken by the Permittee that affect MS4 discharges to the waterbody segment that is the subject of the TMDL. The report must also identify the status of any applicable TMDL implementation schedule milestones."